

### REMARKS

Applicants appreciate the Examiner's thorough review of the present application, and respectfully request reconsideration in light of the preceding amendments and the following remarks.

Claims 2-13 are pending in the application. Claims 5-6 and 8 have been amended solely to improve claim language without otherwise touching the merits. Claims 12-13 have been added to provide Applicants with the scope of protection to which they are believed entitled. New claims 12-13 find solid support in original claim 5. No new matter has been introduced through the foregoing amendments.

The claim objection is believed overcome in view of the above amendments.

The 35 U.S.C. 103(a) rejection of claims 2-5 as being obvious over *Foederer* (U.S. Patent No. 4,391,484) is traversed because the reference fails to disclose, teach or suggest all elements of the rejected claims.

As to claim 2, the Examiner alleged that *Foederer* discloses the claimed invention except for a metal blade which is an integral extension of the track of the circuit. The Examiner then, relying on legal precedent, argued that it would have been obvious to a person of ordinary skill in the art to have modified *Foederer* to include the missing claimed limitation because it has been held that forming in one piece an article that has formerly been formed in two pieces involves only routine skill in the art.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a **reasonable expectation of success**. Finally, the prior

art reference (or references when combined) must teach or suggest all the claim limitations. See *MPEP*, section 2143 (emphasis added).

Legal precedent can provide the rationale supporting obviousness **only** if the facts in the case are sufficiently similar to those in the application. If the applicant has demonstrated the criticality of a specific limitation, it would not be appropriate to rely **solely** on case law as the rationale to support an obviousness rejection. See *MPEP*, section 2144, page 2100-129 (emphasis added).

The Examiner's obviousness rejection is traversed for the following reasons.

First, the Examiner did not specify the facts in the case being relied upon, i.e., *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893), and did not demonstrate why the facts can be considered similar to those in the instant application. Therefore, Applicants are not persuaded that the Examiner can properly rely on the case. Note, also *MPEP*, section 2144.04.V.B citing *Schenck v. Nortron Corp.*, 713 F.2d 782, 218 USPQ 698 (Fed. Cir. 1983) where it has been held that making integral what had been made in several pieces may be patentable.

Second, Applicants have demonstrated the criticality of the "integral extension" limitation in page 3, lines 3-14 of the specification, i.e., the inventive device can be made faster and cheaper by co-molding a metal strip including the blade and the track with a resin supporting board. Therefore, it would not be appropriate to rely solely on case law as the rationale to support the obviousness rejection. If the Examiner intends to maintain the rejection, a further rationale supporting obviousness will be required.

Third, a person of ordinary skill in the art would not have been motivated to make the *Foederer* box connector as an integral extension of conductive tracks 36 (FIGs. 7-8) on PCB 35 for lack of a reasonable expectation of success. *Foederer* relates to connecting several conductors on a printed circuit board (PCB) by means of a box connector. See column 1, lines 5-9. Board 35 is

consistently described in the *Foederer* patent as a PCB. See, for example, claim 1, column 1, lines 28-32, 55-60, column 2, lines 10-15, column 3, lines 13-15. Generally, metal tracks in a PCB are made by processes such as masking, electroplating or vapor depositing, and etching, and should not have significant thicknesses because otherwise it would take very long time to produce the PCB. Thus, if the tracks on the *Foederer* PCB were made to have integral extensions bent outwardly of the plane of the PCB in the presently claimed manner, it would take an unacceptably enormous amount of time, if at all possible, to build (e.g., by electroplating or vapor depositing) the extensions of significant thickness (from about reference numeral 14 to 22) as shown in FIGs. 7-8 of *Foederer*. Accordingly, a person of ordinary skill in the art would have been discouraged from making the Examiner's proposed modifications.

For the overwhelming reasons advanced above, Applicants respectfully submit that claim 2 is patentable over the applied art of record, and request that the obviousness rejection of claim 2 be withdrawn.

Claims 3-5 depend from claim 2, and are considered patentable at least for the reason advanced with respect to claim 2. Claims 3-5 are also patentable on their own merits since these claims recite other features of the invention neither disclosed, taught nor suggested by the applied art.

As to claims 3-5, the Examiner did not specify how the claim limitations are met by *Foederer*. **Applicants respectfully request that the relevant teachings of the prior art relied upon be specified with reference to the relevant column or page number(s) and line number(s) where appropriate.** See MPEP, section 706.02(j).

As to claim 3, Applicants respectfully submit that *Foederer* fails to disclose, teach or suggest a **semicircular** seat (see claim 2) which is formed at the **vertex** of the V defining said groove. In *Foederer*, portion 7 does not have a semicircular shape due to the extensions designated

as 29 and 30 in FIG. 1.

As to claim 5, Applicants respectfully submit that *Foederer* fails to disclose, teach or suggest a strip being **co-molded** with the board. The PCB of *Foederer* is not described or modifiable to be co-molded with its metal tracks.

Independent claims 6 and 8 are patentable over *Foederer* and *Reynolds* for the reasons advanced with respect to claim 2.

Furthermore, Applicants respectfully submit that *Reynolds* fails to disclose, teach or suggest a seat that describes **a circular curve extending for more than 180°** in the presently claimed manner. In the attachment to the Office Action, element A, denoted by red ink, shows the insulating sheath of the wire. Element A does not show the shape of the *Reynolds* seat. The shape of the *Reynolds* seat can be seen in FIGs. 4, 6, 9, and 11 of the reference which clearly fails to disclose, teach or suggest the claim limitation.

Of particular note, the Examiner's reading of element A on the claimed circular curve fails to meet another requirement of claims 6 and 8 that the circular curve have a diameter smaller than the diameter of the insulating sheath. Element A of *Reynolds* has a diameter equal to the diameter of the insulating sheath.

Claims 7, 9-13 depend from claim 6 or 8, and are considered patentable at least for the reason advanced with respect to claims 6 and 8. Claims 7, 9-13 are also patentable on their own merits since these claims recite other features of the invention neither disclosed, taught nor suggested by the applied art.

As to claims 7, 9-11, the Examiner did not specify how the claim limitations are met by *Foederer* or *Reynolds*. **Applicants respectfully request that the relevant teachings of the prior art relied upon be specified with reference to the relevant column or page number(s) and line**

number(s) where appropriate. See MPEP, section 706.02(j).

The references, especially *Reynolds*, clearly fail to disclose, teach or suggest the limitations of claims 7, 9-10 as detailed in page 7 of the Amendment filed August 20, 2003.

The references clearly fail to disclose, teach or suggest the limitations of new claims 12-13. See the discussion of claim 5 above.

Each of the Examiner's rejections has been traversed. Accordingly, Applicants respectfully submit that all claims are now in condition for allowance. Early and favorable indication of allowance is courteously solicited.

The Examiner is invited to telephone the undersigned, Applicant's attorney of record, to facilitate advancement of the present application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

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